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Bureau of Land Management

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Virtus Lone Pine 34-11-5 #5 Exploration Well

Location:	**T. 34 S., R. 11 W., sec. 15: portions of the SWNW** **Iron County, Utah.**
Applicant/Address:	**Virtus Oil and Gas Corporation** **1517 San Jacinto St** **Houston, TX 77022**

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1.0 PURPOSE & NEED

INTRODUCTION

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of the Lone Pine well as proposed by Virtus Oil and Gas Corporation (Virtus). The EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or an alternative to the proposed action. The EA assists the Bureau of Land Management (BLM) in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record may be signed for the EA approving the selected alternative, whether the proposed action or another alternative. A Decision Record (DR), including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts (effects) beyond those already addressed in Cedar Beaver Garfield Antimony Resource Management Plan (RMP), dated October 1, 1986. BLM decisions issued as a result of this EA would apply only to BLM-administered public lands.

BACKGROUND

Virtus Oil and Gas Corporation proposes to drill a single exploration oil well, the Lone Pine 34-5-5 #5 in Section 5 , T. 34 S., R. 11 W., SLM, Iron County, Utah, approximately 15 air-miles north of Cedar City, Utah (See Appendix A, APD Map). The proposed well pad and portions of the access road would be located on lands administered by the Bureau of Land Management, Cedar City Field Office (CCFO). Drilling oil and gas wells on public lands, administered by BLM, requires a federal lease. The proposed well pad location and the bottom hole location for the proposed Lone Pine well is located within federal lease UTU-84126.

PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the proposed action is to allow exploration and development of oil and gas on the federal lease. The proposed action is needed to respond to the proponent's Application for Permit to Drill (APD). BLM's oil and gas leasing program is under the authority of the Mineral Leasing Act of 1920, as amended. The Federal Land Policy and Management Act of 1976 (FLPMA) mandates that the BLM manage public lands on the basis of multiple use [43 U.S.C. § 1701(a)(7)], and that lease rights must be permitted in a manner that assures adequate protection of other resource values. Minerals are identified as one of the principal uses of public lands in Section 103 of FLPMA [43 U.S.C. § 1702(c)].

CONFORMANCE WITH BLM LAND USE PLAN

The proposed action is within the jurisdiction of the Cedar City Field Office. The governing document for the project area is the Cedar Beaver Garfield Antimony Resource Management Plan (RMP), approved October 1, 1986. Much of the plan area is currently categorized as open to oil and gas leasing. Fluid mineral exploration and development is supported in the RMP. Minerals Objective A.1 states, "Provide maximum leasing opportunity for oil, gas, and geothermal exploration and development by utilizing the least restrictive leasing categories necessary to adequately protect sensitive resources." The Standards and Objectives for (RMP) assessment also require that, for oil, gas, and geothermal management actions, "Maximum opportunity exists for exploration and development" (RMP, page 37).

RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS

The proposed action is also consistent with Bureau policy and other federal, state and local laws, regulations and plans, including:

- *Mineral Leasing Act (1920)* (30 U.S.C. 181-263, as amended) – Authorizes the Secretary of the Interior to issue leases for the extraction of certain minerals (including oil and gas).
- *Mining and Minerals Policy Act (1970)* (30 U.S.C. 21) – Emphasizes the need for ongoing development of stable domestic mining and minerals industries.
- *Federal Onshore Oil and Gas Leasing Reform Act of 1987* (43 CFR 3162*)* – Amends the Mineral Leasing Act to require BLM to lease lands known or believed to contain oil or gas deposits under a competitive oral bidding system and governs the procedures for site-specific oil and gas permitting...
- *Energy Policy and Conservation Act (EPCA) of 2000* (43 U.S.C. 6361) – Outlines to be factored in to enhance energy development.

- *Energy Policy Act of 2005* (43 U.S.C. 6361) – States environmental protection and energy production are both desirable and necessary objectives of sound land management practices.
- *Rangeland Health Standards and Guidelines* (43 CFR 4100, subsection 4180) – Requires BLM management actions ensure watersheds' physical conditions are properly functioning; ecological process support healthy biotic populations and communities; meet state water quality standards and habitats are maintained or restored for special status species.
- *Federal Land Policy and Management Act (FLPMA) of 1976* (43 U.S.C. 1701 t seq., as amended) – States the BLM consider multiple uses for the lands it administers. FLPMA specifies that the BLM consider the land's inherent natural resources as well as its mineral resources when making land management decisions.
- *Endangered Species Act (ESA) of 1973* (as amended)
- *Eagle Protection Act, 1940* as amended
- BLM special status species policy (6840 Manual, 9/16/88)
- Executive Order 13186 (Migratory Bird Treaty Act)

IDENTIFICATION OF ISSUES

To facilitate the identification of potential issues from the public, the project description was posted on the Environmental Notification Bulletin Board (ENBB) on the BLM's website on March 30, 2015.

BLM resource specialists reviewed the proposed action and determined which elements of the human environment might be affected by the proposed action and alternative. This review is documented in Appendix B. The resources which might be affected include air quality and climate change, soils and vegetation. These resources are addressed further in this document.

2.0 DESCRIPTION OF THE ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This section of the EA provides a description of the alternatives, which include the proposed action and the no action alternative. Other alternatives were not analyzed in detail in this EA as resource impacts from alternative locations or routes would likely be similar to or greater than those expected from the proposed action.

PROPOSED ACTION

Virtus has proposed to drill the Lone Tree Federal 34-11-5-5 oil and gas exploration well in Section 5 , T. 34 S., R. 11 W., SLM, Iron County, Utah (Appendix A, APD Map). The well would be drilled on lands and minerals administered by the BLM. Virtus has filed an application for the proposed well with the BLM Cedar City Field Office and the Utah Division of Oil, Gas and Mining (UDOGM). The APD for the well includes a Surface Use Plan of Operations (SUPO) and a Drilling Program. The Surface Use Plan of Operations provides specifications for construction of the well pad and access road, well pad layout, and restoration of the well pad. The Drilling Program provides specifications of the drilling operations, the mud system, borehole pressure control, and other technical aspects of drilling operations. These documents are available in the case file located in the Cedar City BLM office and are incorporated by reference into this EA. The lease location is open to oil and gas operations, subject to standard lease stipulations. Lease notices which apply to the proposed project area are contained in Appendix C.

Virtus is proposing to construct the location and drill the well as soon as the APD is approved and complete the well by the end of December 2015. Construction activities would not occur between April 1 and July 30 to avoid impacts to fawning pronghorn and migratory birds.

Construction of the well pad and the upgrading of the access would begin in August 2015 or as soon as authorization was received from the BLM. Construction would require approximately 1 to 2 weeks.

Virtus' proposed construction, drilling, completion, reclamation, and abandonment procedures for the well are discussed below.

Well Pad

Drilling the well would require first the construction of a well pad, then temporary occupancy by a drill rig with ancillary equipment for the drilling of the well. Construction of the proposed well pad, including cuts, fills and spoil piles would result in the disturbance of approximately six acres. The pad would be stripped of vegetation and topsoil as part of construction. Topsoil would be stockpiled for reclamation. The

constructed well pad would have a one percent slope for drainage. In fill areas of the pad, the edges would be diked to control surface runoff from the pad. Cut surfaces would be stabilized as needed.

A reserve pit would be constructed on the west side of the location to facilitate the management and handling of drill cuttings and drilling mud. The pit would be 200 feet by 100 feet by 10 feet with 4 feet of freeboard. It would be lined with a 12 mil liner and fenced on three sides to prevent wildlife or livestock entry. The fourth side would be fenced as soon as drilling was completed, and would remain until the pit was dry. No trash, scrap, pipe, etc. that could puncture the liner would be disposed of in the pit. Netting would be installed if hydrocarbons became present in the pit and would remain in place until the liquid phase of the pit contents were removed and the remaining material sufficiently solidified and stable to facilitate backfilling and subsequent rehabilitation of the pit area. The pit liner would overlap the sloped wall of the pit onto the flat pad surface for a distance of 4 feet. The overlap would be anchored in place with a dirt berm approximately 1.5 feet high.

Access Road

The proposed route from Cedar City would utilize Interstate Highway 15, State Road 130, and Horse Hollow Road to a point where the two-track access road to the surface location begins. The existing two-track access would be improved as a temporary access road into the location. The roadway would be non-elevated, but would have gravel placed in specific areas to provide stability for the heavy truck traffic. Two traffic by-pass 'knuckles' would be constructed to assist with truck ingress and egress. After the flat-blading of the two track, the requirement for temporary culverts would be assessed and installed if necessary. No low water crossings are contemplated. About three acres of new disturbance would result from the proposed access route.

All access roads and surface disturbing activities would conform to the standards outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (Gold Book –Fourth Edition - Revised 2007).

Ancillary Construction Activities

Sewage would be contained in portable, self-contained, chemical toilets during construction and drilling operations. Trash would be contained in a portable, self-contained trash cage and hauled to a sanitary landfill.

Vehicle Traffic

The heaviest traffic would occur during rig up and rig down operations with approximately 40 loads in and 40 loads out at completion. Units may be trucks, cars or

pickups. This phase would last about 4 to 5 days. The next phase would be the drilling operation. During this phase there would be approximately 15 to 20 units using the road per day. Some days would only have 5 to 6 units per day. Long term road use estimates would be approximately 300 units per week (one week only) during rig up and rig down, and about 400 units per month during drilling. Drilling would be expected to last about 60 to 90 days.

There would be approximately two loads of water taken to the site each day during drilling. If production is established, vehicle traffic would be approximately two trips per week.

Drilling and Completion

Once the access road and well pad construction were completed, a drill rig would be mobilized to the site and set-up for drilling. Virtus' drilling program for the well provides specifications on anticipated formations, mud system, potential water and hydrocarbon intervals, casing, cementing, and other standards. Although high pressures are not anticipated, blow-out preventer equipment would be installed on the casing head and tested to ensure control of borehole pressures and fluids. Surface and other casings would be set with cement to prevent migration of borehole fluids and contamination of any fresh water aquifers penetrated in the borehole and to isolate potentially productive hydrocarbon zones. The well would be drilled with a combination of various drilling fluids to maintain borehole pressures, and the mud weight would be monitored to ensure proper weighting of the drilling fluid for anticipated borehole pressures. Both fresh-water, weighted mud and salt-saturated fluid would be used.

Virtus' drilling program for the well has been reviewed by a BLM geologist and petroleum engineer for adequacy of the plan and for conformance with the Federal regulations and onshore orders. Conditions of Approval (COAs) would be added to the drilling permit as necessary to ensure that the Drilling Program has provisions for protecting water zones, mineral zones, and hydrogen sulfide zones.

Water for the well pad construction, drilling and operations would be obtained from Enoch, Utah, a local source of municipal water. Approximately 20,000 barrels of water is anticipated for dust suppression, drilling and completion of the well.

Cuttings and all borehole fluids produced during the drilling operations would be contained in the reserve pit. Waste water would not be discharged on the surface.

Drilling operations would require approximately 60 to 90 days. Drilling operations would occur on a 24-hour, 7-day per week schedule. Once the well was drilled to its total depth, evaluation of potential reservoirs would be accomplished through well testing. If the well is determined to be capable of production, completion operations would begin, which could require an additional 10 to 20 days. Typically, the drill rig is demobilized, and a smaller work-over rig is used for completion. Testing of a gas

reservoir would be accomplished by venting or flaring the produced gas to the flare pit, and testing of oil would require holding produced fluids in tanks on the well pad. In addition, temporary production facilities would include the well head and a dehydrator/separator unit.

Production and Maintenance Operations

The access road and the well pad would be maintained for reasonable access and working conditions. Traffic volumes for tanker trucks during production would be dependent upon whether the well produced natural gas or oil, and for the latter, the volume of oil produced.

Portions of the well pad not needed for on-going operations, including the reserve pit, would be re-contoured and reclaimed. This action would be an interim reclamation of the site per the SUPO and would be consistent with BLM's Best Management Practices (BMPs).

Oil Production: If oil were produced, the oil would be transported by truck to a refinery. The produced oil would be stored in tanks located on the well pad and hauled by tanker trucks. A tank battery may be constructed on the disturbed surface of this pad if oil were produced in commercial quantities. If constructed, it would be surrounded by a dike of sufficient capacity to contain 110% of the storage capacity of the largest tank. All loading lines and valves would be placed inside the berm surrounding the tank battery. All liquid hydrocarbon production and measurement would conform to the provisions of 43 CFR 3162.7-3, Onshore Oil and Gas Order No. 4 and Onshore Oil and Gas Order No. 5 for natural gas production and measurement.

Natural Gas Production: Natural gas production from this well is not anticipated. In the unlikely event that gas were discovered in commercial quantities, construction of a gas pipeline would be considered. If natural gas were produced, construction of a pipeline would be necessary to transport the gas and additional access road modifications may be needed. An additional analysis under NEPA would be completed, as needed, for any natural gas pipelines, access modifications, and/or other production facilities across public lands.

Facilities: All permanent structures would be painted a flat, non-reflective covert green to match the standard environmental colors. All facilities would be painted within six months of installation. The paint color of facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. All surface facilities would be painted immediately after installation and under the direction and approval of the BLM.

Plugging and Abandonment

If the proposed well did not produce economic quantities of oil or gas, or when it was no longer commercially productive, the well would be plugged and abandoned. The well

would be plugged following specifications from a BLM petroleum engineer, which would include requiring cement plugs at strategic positions in the well bore.

Following plugging, all fluids in the reserve pit would be allowed to dry prior to reclamation work. If the fluids in the reserve pit had not evaporated, the fluids would be pumped from the pit and disposed of in accordance with applicable regulations. Once the reserve pit dried, the reserve pit would be backfilled and compacted, the well pad would be re-contoured to the natural topography to the extent practicable, and topsoil would be re-spread over the site. All final reclamation work would take place during the period of September 1 to December 31 of the year following the year the well is plugged.

The entire access road would be surrendered to the BLM and maintenance would revert back to the BLM except for the short section that connects to two well pads. The existing road would be reclaimed back to an 8-foot width.

Restoration of the Surface (Interim and Final Reclamation)

Site reclamation for a producing well would be accomplished for portions of the site not required for the continued operation of the well.

Interim reclamation would utilize BLM BMPs and would be completed within 90 days of completion of the well to reestablish vegetation, reduce dust and erosion, and compliment the visual resources of the area. All equipment and debris would be removed from the area proposed for interim reclamation and the pad would be re-contoured. The area outside of the rig anchors and other disturbed areas not needed for the operation of the well would be reseeded with a BLM approved seed mix as prescribed in the COA's. Reclaimed areas receiving incidental disturbance during the life of the producing well would be re-contoured and reseeded as soon as practical.

All equipment used to construct the well pad and access road and equipment used in drilling would be power washed to remove any invasive, non-native weed seeds that might be attached to the equipment to reduce the potential of introducing and spreading weed species. The operator would control noxious weeds along the access road, well site, or other applicable facilities by spraying or mechanical removal. A list of noxious weeds may be obtained from the BLM or the Iron County Extension Office. On BLM administered land, a Pesticide Use Proposal (PUP) would be submitted and approved prior to the application of herbicides, pesticides or possibly hazardous chemicals.

Prior to final abandonment of the site, all disturbed areas of the well pad would be scarified and left with a rough surface. The site would then be seeded and/or planted with the following seed mix prescribed by the BLM.

Seed Mix		Pounds/Acre
Grasses	Thickspike Wheatgrass	1.00 lbs/acre
	Bluebunch Wheatgrass	1.50 lbs/acre
	Intermediate Wheatgrass	2.00 lbs/acre
	Western Wheatgrass	1.00 lbs/acre
	Sandberg Bluegrass	0.50 lbs/acre
	Indian Ricegrass	2.00 lbs/acre
	Needle-and-thread grass	1.00 lbs/acre
Forbs	Western Yarrow	0.50 lbs/acre
	Milkvetch	0.50 lbs/acre
	Salsify	0.50 lbs/acre
	Lewis Flax	0.50 lbs/acre
	Globemallow	0.50 lbs/acre
	Cicer Milkvetch	0.25 lbs/acre
	Tapertip Hawksbeard	0.25 lbs/acre
	Palmer Penstemon	0.50 lbs/acre
Shrubs	Antelope Bitterbrush	0.50 lbs/acre
	Wyoming Big Sagebrush	0.50 lbs/acre
		13.5 lbs/acre

NO ACTION ALTERNATIVE

The No Action Alternative would be to deny the APD as proposed. With this alternative, BLM would not approve the Virtus well and the applicant would not be allowed to drill the proposed exploratory well in the manner or location proposed. Oil and gas leases allow drilling in the lease area, however, subject to the stipulations of the specific lease agreement. BLM can deny an APD if the proposal would violate lease stipulations, applicable laws or regulations and the BLM can impose restrictions to prevent undue or unnecessary environmental degradation. The applicant would have the option of modifying their proposal or submitting an APD for a different location on their lease. Any new proposals would be treated as a new project and would be subject to additional environmental analysis.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

No other alternatives were identified as they would have similar, if not greater impacts than the proposed action.

3.0 AFFECTED ENVIRONMENT

INTRODUCTION

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Analysis Record Checklist found in Appendix B. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

GENERAL SETTING

The project area is located approximately 15 miles north of Cedar City, Utah (see Appendix A), in the upper Cedar Valley. The major vegetation type in the project area is sagebrush grasslands. The elevation of the project area is approximately 5,400 feet.

Resources/Issues Brought Forward for Analysis

The checklist contained in Appendix B indicates which resources of concern are either not present in the project area or would not be impacted to a degree that requires detailed analysis. Resources which could be impacted to a level requiring further analysis are described below and impacts to these resources are analyzed in Chapter 4.

Air Quality

The existing air quality in the project area is typical of undeveloped regions in the western United States. Specifically, Iron County is designated as attainment or unclassified for all NAAQS. This classification indicates that the concentration of criteria pollutants in the ambient air is below National Ambient Air Quality Standards (NAAQS), or that adequate air monitoring is not available to determine attainment. A variety of activities and associated sources in and in the vicinity of the proposed action affect local and regional air quality. Anthropogenic sources of emissions include on-road mobile sources, non-road mobile sources (such as construction equipment and off-road vehicles), and area sources (which include a wide variety of industrial and residential sources). On-road and off-road mobile sources are responsible for more than half of all nitrogen oxide (NO_x) emissions in Iron County. On-road mobile emissions are associated with automobile and truck traffic along the Interstate 15 corridor and associated state and local highways and roads in these counties. On-road mobile emissions are also the major source of carbon monoxide (CO) emissions in Iron County. Only a small fraction of the overall emissions total is from point sources, reflecting the fact that there are no major point sources, such as power plants, in the county. Most volatile organic compound (VOC) emissions and a sizeable portion of CO emissions are from biogenic sources.

The table below lists emissions and sources of emissions in Iron County for several criteria pollutants based on the 2011 Statewide Emissions (http://www.epa.gov/air/emissions/index.htm).

2011 Criteria Pollutant Inventory (tons per year)

Source	CO	NOx	PM10	PM2.5	SOx	VOCs
Biogenic	6751	305	0	0	0	33695
Mobile	10764	3143	139	120	15	903
Fires	3281	63	407	324	25	604
Agriculture	0	0	190	36	0	0
Solvent	0	0	0	0	0	469
Dust	0	0	4938	525	0	0
Miscellaneous (ie. Waste Disposal, gas stations, commercial cooking)	428	14	83	67	1	335
Industrial Processes	0	0	48	10	0	255
Total	21614	3669	5865	1138	133	36326

CO Carbon Monoxide
NOx Nitrogen Oxide
PM2.5 Particulate matter less than 2.5 microns in diameter
PM10 Particulate matter less than 10 microns in diameter
SOx Sulfur Oxide
VOC Volatile Organic Compound

The nearest ozone (O_3) monitoring site to the planning area is the Santa Clara site in Washington County. The current O_3 "design value," defined as the 3-year average of the annual fourth highest 8-hour average observed concentration, is 65 parts per billion (ppb), which is below the current 8-hour O_3 NAAQS of 75 ppb.

While there are no particulate material (PM) data available for the planning area, PM data are available for Zion, Bryce Canyon, and Great Basin national parks. The table below summarizes and compares PM_{10} and $PM_{2.5}$ concentrations from these areas with the NAAQS. These values are representative of recent regional concentrations outside the planning area.

Representative PM_{10} and $PM_{2.5}$ Concentrations for 2007-2009 for Three Nearby National Parks Compared with the NAAQS

Pollutant	Averaging Time	NAAQS (µg/m3)	Bryce Canyon NP (µg/m3)	Zion NP (µg/m3)	Great Basin NP (µg/m3)
PM_{10}	24-hour	150	30.9	65.8	104.9
$PM_{2.5}$	Annual	15	3.0	3.3	2.7
	24-hour	35	11.3	10.0	10.6

Hazardous air pollutants (HAPs) are not monitored in Iron County. Although many VOCs are HAPs, these are mostly associated with anthropogenic sources. The Utah Division of Air Quality Statewide Emissions Inventory indicates that VOC emissions in Iron County are primarily from biogenic sources. HAPs concentrations are expected to be greatest near anthropogenic VOC sources such as population centers and roadways, but are not a primary air quality concern for the area. The scarcity of HAP sources in the planning area does lend itself to a reasonable estimation of HAP emissions.

Climate Change

The climate in the planning area is designated as steppe land, which occurs between desert and mountain regions and represents the most extensive climatic zone in Utah. The steppe land climate zone is characterized as semi-arid, with an average of 8 to 14 inches of precipitation per year. On average, July is the warmest month in the planning area (with an average maximum temperature of 90.3 degrees Fahrenheit (ºF) and January is the coldest (with an average minimum temperature of 17.3 ºF). The overall annual precipitation is greatest in March (1.21 inches), and the greatest amount of snowfall typically occurs in January (8.5 inches).

Throughout the planning area, the BLM authorizes numerous types of activities and actions that result in GHG emissions, with the largest contributor being the combustion of fossil fuels for on-road and off-road vehicles, engines, and construction equipment. Additional activities that result in GHG emissions include prescribed burns and other fire management activities; authorization of Rights-of-Way (ROWs) for energy development and transmission, roads, pipelines, and other uses; grazing permits; and mineral exploration and development.

No standards have been set by EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions.

Soils

The project area is located within Iron County. Soils within Iron County have been inventoried, studied, mapped and described as part of the Iron-Washington Soil Survey published in 1996 (USDA, SCS 1996). Soils on the site are loamy with moderate to rapid permeability and a moderate to high potential for wind erosion. About 9 acres of soils would be affected by the proposed action. Semi-desert shallow hardpans also occur on the site, which can be subject to rapid runoff, overland flows and sheet erosion. However, within the project area, slopes on this ecological site are generally less than 10%, thus limiting their susceptibility to erosional forces. Silt loam sites (Loamy Bottoms) are susceptible to wind erosion due to the fine nature of the surface texture.

The potential for wind erosion is greater if these sites are disturbed or exist in a degraded vegetative condition.

Vegetation

The vegetation throughout the project area is primarily composed of grasses, forbs and shrubs. The vegetation community types located on the site include native cool and warm season grasses and upland shrubs. Native cool and warm season grasses present may include, but are not limited to, needle and thread (Hesperostipa comate), Indian ricegrass (Achnatherum hymenoides), bottlebrush squirreltail (Elymus elymoides), bluegrasses (Poa spp.), galleta (Pleuraphis jamesii), blue grama (Bouteloua gracilis), purple threeawn (Aristida purpurea), and sand dropseed (Sporobolus cryptandrus). Upland shrub species may include, but are not limited to, winterfat, big sagebrush (Artemisia tridentata), black sagebrush (Artemisia nova), Wyoming big sagebrush (Artemisia tridentata wyomingensis), yellow rabbitbrush (Chrysothamnus viscidiflorus), and broom snakeweed (Gutierrezia sarothrae). Pinyon pine (Pinus edulis) and Utah juniper (Juniperus osteosperma) are not present on the site.

4.0 ENVIRONMENTAL IMPACTS

INTRODUCTION

This section describes the changes which could occur to the existing environment if the proposed action or the No Action Alternative were implemented

DIRECT/INDIRECT IMPACTS

Proposed Action

Air Quality and Climate Change

Throughout the planning area, the BLM authorizes numerous types of activities and actions that result in greenhouse gas (GHG) emissions, with the largest contributor being the combustion of fossil fuels for on-road and off-road vehicles, engines, and construction equipment. Additional activities that result in GHG emissions include prescribed burns and other fire management activities; authorization of ROWs for energy development and transmission, roads, pipelines, and other uses; grazing permits; and oil and gas and other mineral exploration and development. Although individually these activities result in small amounts of GHG emissions, they do contribute to the regional, national, and global pool of GHG emissions. However, it is anticipated that greenhouse gas emissions associated with this action would be negligible given the existing emissions from other unregulated emission sources.

In addition to direct GHG emissions, indirect GHG emissions and other factors potentially contributing to climate change include fires; land use changes (e.g., converting rangelands to urban use); and wind erosion, fugitive dust from roads, and entrained atmospheric dust that darkens glacial surfaces and snow packs and results in faster snowmelt. Other activities could help sequester carbon, such as managing vegetation to favor perennial grasses and increase vegetation cover, which could help build organic carbon in soils and function as "carbon sinks."

Soils

Soil would be disturbed during the construction and reclamation phases of the project. About nine acres of soil would be displaced through new and upgraded road construction and well pad construction. The access road would result in about three acres and the well pad about six acres of soil disturbance. Topsoil would be stored and used during reclamation after the well is plugged and abandoned. Some soil loss due to wind erosion and decreased soil viability would be expected.

Vegetation

About 9 acres of upland vegetation would be disturbed. The site in the short term would be converted from predominately sagebrush to mostly grasses and forbs. With proper reclamation, as proposed, the grasses and forbs should return to good condition within five years, as demonstrated by vegetation treatment projects in the same watershed. Sagebrush could take 15 years or more to regenerate. If oil or gas was found in the well, the restoration of this vegetation could take 50 years or more. Since this general area has not been highly disturbed by other activities, this would be a relatively small impact.

Monitoring and Compliance

Under the Proposed Action, the operator would be required to notify the BLM prior to construction work on federal lands. Notification to the BLM would also be required when the proposed well was spudded. Qualified BLM personnel would inspect the drilling operations and facilities and would witness cementing and testing of blow-out preventer equipment as necessary. The operator would be required to notify the BLM prior to plugging and abandonment of the well. The operator would be required to notify the BLM prior to reclamation work on public lands. Reclaimed sites on public lands would be monitored by the operator and inspected, at least annually, by BLM staff until the sites were satisfactorily rehabilitated. Virtus and BLM would inspect disturbed project areas for noxious weeds. If reclamation and/or reseeding were not successful, it would be repeated. Methodology may be changed in consultation with the Authorized Officer.

No Action Alternative

The No Action Alternative could result in no impacts to the existing environment if Virtus chose not to drill the wells with altered applications. However, they could choose to alter their proposed action, which would require the submission of a new APD and additional NEPA analysis.

Cumulative Impacts

Cumulative impacts are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

Reasonably Foreseeable Action Scenario (RFAS)

Other activities in the area of the proposed action include dispersed use, such as off-road vehicle (OHV) use, hunting and livestock grazing. If the drill hole encounters oil, long-term facilities and periodic truck hauling of produced oil would occur. Although

details of this potential development are not known at this time, and additional environmental analysis would be performed prior to well production development, a general analysis of cumulative impacts, including well development, is included below. The potential for full-field development, including multiple well locations, is beyond the scope of this document, but would be analyzed in detail in the future should the situation arise.

Cumulative Impacts

The area has been disturbed in the past by livestock grazing, seasonal hunting, unimproved roads, OHV use, and vegetation manipulation including fire and mechanical treatments. These disturbances have been there for decades and have not caused substantial impacts to the human environment. While OHV use is increasing, it is not a heavy-use recreation area. Since the area is currently open to OHV travel, improved access may result in increased OHV off road travel, resulting in increased impacts to soil and vegetation. However, the proposed action is not expected to substantially add to the impacts in the general location of the drill pad and access road.

If an oil or gas well was developed, the existing drill pad would be used for the well head and other facilities and the entire access road would be left in place for a period of up to 40 years. If oil were discovered, heavy-vehicle use would continue as oil was removed by truck from the well. If natural gas was discovered, a pipeline to connect the well to an existing gas pipeline might be constructed along an unknown route.

Potential cumulative impacts would affect the same resources analyzed in detail in this EA. If oil or gas were produced, additional impacts would be minimal, as little additional acreage would be disturbed. Impacts, however, to soil and vegetation would be longer term as the area would not be reclaimed for an extended period of time. If gas was produced, additional impacts could occur from a pipeline. The amount of additional disturbance required for this pipeline is unknown at this time. Also, a producing well would require that the access road be plowed of snow in the winter. This would open up the area to additional motorized recreational activities during the winter.

Because the area has had little disturbance in the past, and the anticipated impact area is nine acres, substantial cumulative impacts are not anticipated for the proposed action or alternative.

5.0 CONSULTATION AND COORDINATION

Introduction

This chapter of the EA provides information on the consultation and coordination that occurred during the NEPA process. Appendix B provides the rationale for issues that were considered but not analyzed further.

Persons, Agencies and Organizations Consulted

Table 5-1: List of all Persons, Agencies and Organizations Consulted for Purposes of this EA

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Utah State Historic Preservation Office (SHPO)	Consultation for undertakings, as required by the National Historic Preservation Act (NHPA) (16 USC 470)	Proposed project area has been surveyed for cultural resources and no historic properties were found. Consultation will be carried out under current protocol by quarterly report to SPHO.
Utah Div. of Wildlife Resources	Informal discussions and use of data from their web site. UDWR is the agency with expertise on local wildlife.	Data and information from UDWR web sources incorporated into EA.
Paiute Indian Tribe of Utah	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	Since no cultural resource sites were found, the tribe has indicated that they are not concerned with this project. They would like to be informed of any changes or updates to the project

Summary of Public Participation

To facilitate the identification of potential issues from the public, the project description was posted on the Environmental Notification Bulletin Board (ENBB) on the BLM's website on March 30, 2015. The Southern Utah Wilderness Alliance made an e-mail request dated April 2, 2015 for a 15 day comment period, following the initial ENBB posting for the APD through the prior operator, Tidewater Oil and Gas. A 15 day comment period was offered beginning on July 29, 2015.

List of Preparers

BLM staff specialists who determined the affected resources for this document are listed in Appendix B. Those who contributed further analysis in the body of this EA are listed below.

List of Preparers

BLM Preparers:

Name	Title	Responsible for the Following Section(s) of this Document
Ed Ginouves	Mining Engineer	Project Lead
Jeff Reese	Natural Resource Specialist	Review of Soil, Livestock and Vegetation Findings
Gina Ginouves	Environmental Coordinator	NEPA Review

APPENDICES

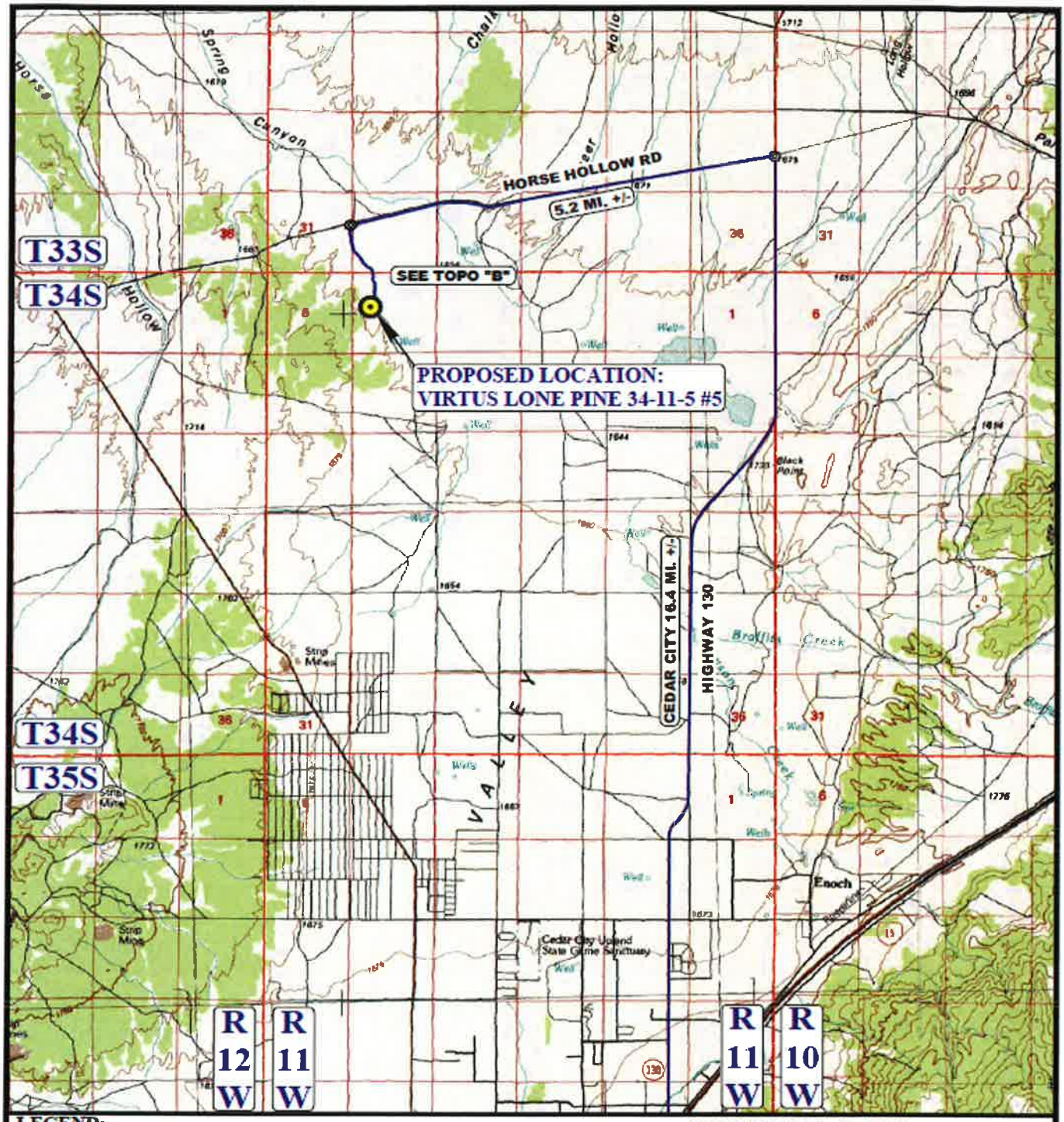
Appendix A: Maps

Appendix B: Interdisciplinary Team Analysis Record Checklist

Appendix C: Lease Notices

APPENDIX A

MAPS



LEGEND:

PROPOSED LOCATION

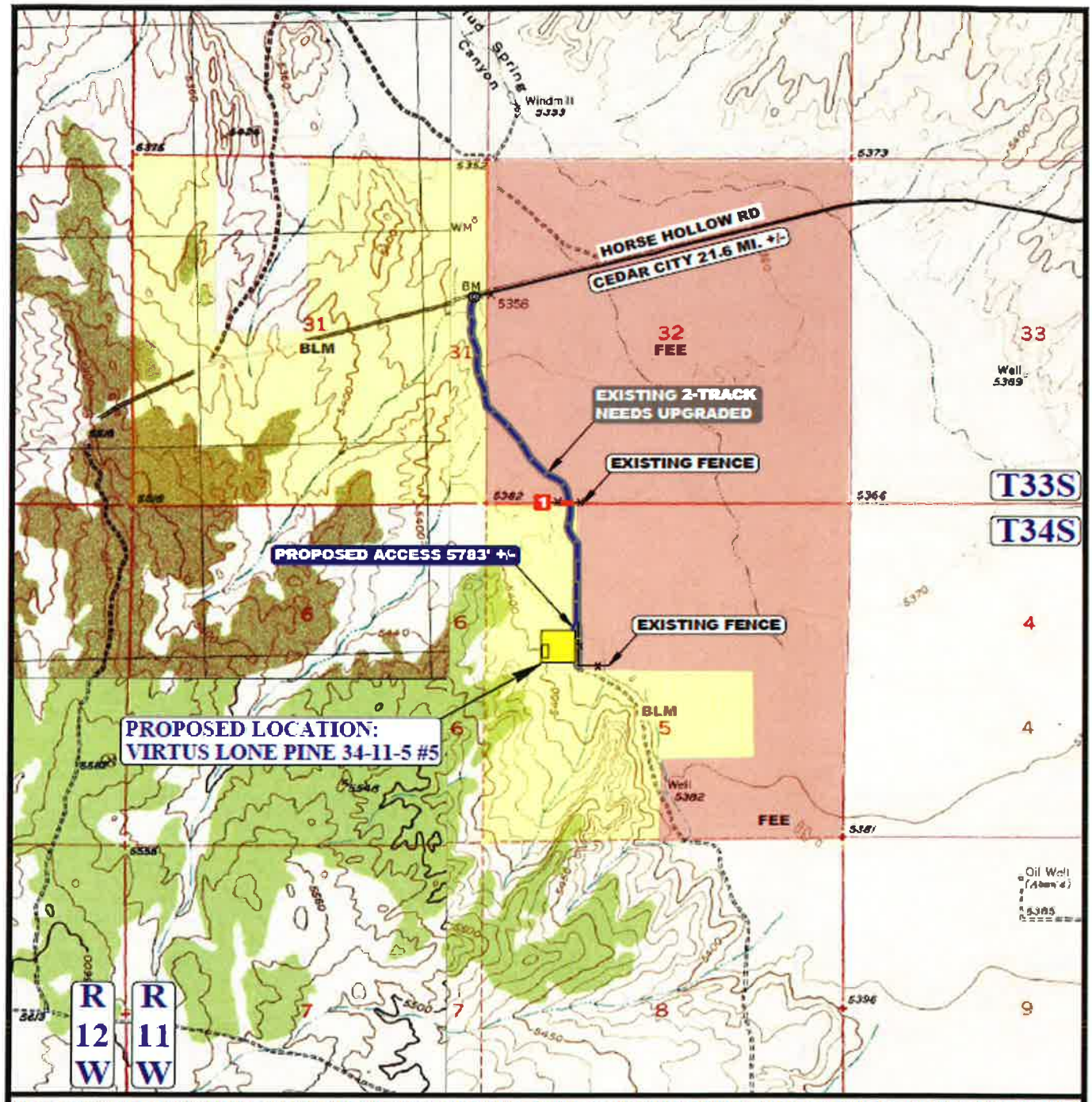
VIRTUS OIL & GAS

VIRTUS LONE PINE 34-11-5 #5
SECTION 5, T34S, R11W, S.L.B.&M.
2249' FNL 976' FWL

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

DRAWN BY: C.B.	DATE DRAWN: 01-22-15
SCALE: 1:100,000	REVISED: 06-15-15 J.M.C.

ACCESS ROAD MAP | **TOPO A**



NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

LEGEND:

- EXISTING ROAD
- PROPOSED ROAD
- EXISTING FENCE
- EXISTING 2-TRACK NEEDS UPGRADED
- 1 CATTLE GAURD REQUIRED

VIRTUS OIL & GAS

VIRTUS LONE PINE 34-11-5 #5
SECTION 5, T34S, R11W, S.L.B.&M.
2249' FNL 976' FWL

DRAWN BY: C.B.	DATE DRAWN: 01-22-15
SCALE: 1" = 2000'	REVISED: 06-15-15 J.M.C.

ACCESS ROAD MAP | **TOPO B**

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

APPENDIX B

INTERDISCIPLINARY TEAM ANALYSIS RECORD CHECKLIST

INTERDISCIPLINARY TEAM NEPA CHECKLIST

Project Title: Virtus Lone Tree 34-11-5 #5 Exploratory Well, APD

NEPA Log Number: DOI-BLM-UT-CO10-2015-0044-EA

File/Serial Number: UTU-84126, Lease Operations

Project Leader: Ed Ginouves

GIS DATA:

DETERMINATION OF STAFF: ***(Choose one of the following abbreviated options for the left column)***

NP = not present in the area impacted by the proposed or alternative actions
NI = present, but not affected to a degree that detailed analysis is required
PI = present with potential for relevant impact that need to be analyzed in detail in the EA
NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form.
The rationale column should include NI and NP discussions.

RESOURCES AND ISSUES CONSIDERED:

Determi-nation	Resource	Rationale for Determination	Signature	Date
PI	Air Quality	Air quality in the area is good, as is typical of undeveloped areas of the western United States. Road construction, repeated travel of roads and operations at the drill pad travel would generate dust and fumes which would quickly settle or disperse. However, the increased pollutant concentrations resulting from the project are not anticipated to exceed NAAQS thresholds or PSD increments, and are predicted to be well within both EPA and State of Utah HAP emission recommended screening thresholds.	E. Ginouves	7/6/2015
NP	Areas of Critical Environmental Concern	There are no ACECs within the CCFO.	Dave Jacobson	7/6/2015
NP	Cultural Resources	On March 13, 2015, the CCFO archaeologist conducted a Class III survey of the project area, for an identical proposal. No historic properties were located during this survey. Since this project is less than 50 acres and no historic properties will be affected, it will be submitted to SHPO under the CCFO quarterly report.	Jamie Palmer	7/6/2015
PI	Greenhouse Gas Emissions	See EA text.	E. Ginouves	7/6/2015
NI	Environmental Justice	There are no affected groups, minority or low income, disproportionately affected.	E. Ginouves	7/6/2015
NP	Farmlands (Prime or Unique)	The Iron County soil survey identifies certain soils in the area as having prime farmland characteristics when supplied with irrigation water. No lands in the area receive irrigation water, therefore there are no prime farmlands present. No unique farmlands are identified in the area either.	E. Ginouves	7/6/2015

Determi-nation	Resource	Rationale for Determination	Signature	Date
NI	Fish and Wildlife	The area is identified as crucial yearlong pronghorn habitat. Construction would not be allowed during the fawning period April 15 – June 15. Additional traffic would increase year-round on existing roads, but impacts would not be expected to pronghorn fawning. See attached wildlife report.	S. Whitfield	7/6/2015 Updated 7/13/15
NP	Floodplains	According to Iron County, GIS mapping services, the project area does not lie in any floodplain.	E. Ginouves	7/6/2015
NI	Fuels/Fire Management	There would be no impact to fire/fuels as long as they take precautions to prevent starting fires with the vehicles or other equipment. NI if fire suppression equipment would be available to suppress any wildfires caused by construction or related activities. Fire incident reporting should be to the Color Country Interagency Fire Center at (435) 865-4600.	M. Mendenhall	7/6/2015
NI	Geology / Mineral Resources/Energy Production	Other than Federal oil and gas lease UTU-84126, there are currently no mineral-related authorizations (leases, claims, permits) present on the proposed project area. The lands are prospectively valuable for oil and gas resources. There are no known mineral resources underlying the subject lands other than surficial deposits of common variety sand and gravel.	E. Ginouves	7/6/2015
NI	Hydrologic Conditions	It is expected that topsoil is well armored with surface rock and otherwise protected by a good composition of vegetation.	J. Reese	7/13/2015
PI	Invasive Species/Noxious Weeds	NI if stipulations incorporated. Though there are no known noxious weeds on site, disturbance such as that which is proposed tends to create habitat in which noxious weeds or other invasives can thrive. At some point in the permitting process, proponent adopted measures or mitigation measures need to be developed to limit opportunities for noxious weed invasion (this would include what have become standard practices like controlling any "discovered" populations of noxious weeds prior to construction, power washing all equipment prior to entering the site, using a weed seed free reclamation seed mix, proponent being responsible for noxious weed control through exploration and the term of the reclamation bond, etc.).	J. Bulloch	7/6/2015
NP	Lands/Access	There are no pending or authorized Lands and Realty uses within the proposed area.	M. Campeau	7/6/2015
NI	Livestock Grazing	The Wells are proposed to be drilled on the Sand Hollow Allotment. The Proposed action is not expected to impact grazing within the allotment due to the relatively small amount of disturbance.	J. Reese	7/13/2015
NI	Migratory Birds	Drilling activities could impact nesting migratory birds. April 1 – July 30. Construction would not be allowed during this period. If the well went into production, additional traffic would increase year-round on existing roads, but impacts would not be expected. See attached wildlife report	S. Whitfield	7/6/2015 Update 7/13/15
NI	Native American Religious Concerns	The Paiute Indian Tribe of Utah have reviewed the project and have no objections to the project moving forward. They would like to be informed of any changes or updates to the	Jamie Palmer	7/6/2015

Determi-nation	Resource	Rationale for Determination	Signature	Date
		project.		
NI	Paleontology	The proposed lease operations fall on Quaternary-age alluvium. Using the Bureau's Potential Fossil Yield classification System, the alluvium falls within Class 2, meaning it has a low potential for hosting vertebrate fossils or scientifically significant invertebrate fossils. Given the small scale of the proposed disturbances and the low potential of the impacted surficial formation, the likelihood of impacting fossil resources is very small. No pre-disturbance assessment measures or construction mitigation measures are warranted.	E. Ginouves	7/6/2015
NI	Rangeland Health Standards	Rangeland Health Standards would not be expected to be impacted with the proposed action. Reseeding the well sites after the completion of the project would potentially improve the sites.	J. Reese	7/13/2015
NI	Recreation	The proposed project will not impact any recreation sites or recreation opportunities within the area.	Dave Jacobson	7/6/2015
NI	Socio-Economics	Minor increases in local service sector revenue could be expected from the temporary workforce involved in the project. Lasting substantial impacts to the socioeconomics of the communities in the general project area could result from the well making a discovery of a commercially viable oil/gas resource; however the likelihood of such a discovery is only 10-20%.	E. Ginouves	7/6/2015
PI	Soils	There would be soil disturbance associated with the proposed action.	Jeff Reese	7/13/2015
NP	Special Status Plant Species	There are no known Special Status Plant Species present in the Project area. See attached wildlife report.	Jeff Reese	7/13/2015
NI	Special Status Animal Species	A field inspection was completed on March 13, 2015. . No TEC species were found.	S. Whitfield	7/6/2015 Update 7/13/15
NI	Wastes (hazardous or solid)	No chemicals subject to reporting under SARA Title III in amounts greater than 10,000 pounds would be used, produced, stored, transported, or disposed of annually in association with the project. Trash and other waste materials would be cleaned up and removed immediately after completion of operations. The pit liner would be trimmed or folded and buried so that it will not reemerge at a later date.	E. Ginouves	7/6/2015
NI	Water Resources/Quality (drinking/surface/ground)	There are no known surface waters in the area. It is unlikely subsurface waters would be affected using state of the art drilling and casing techniques.	J. Reese	7/13/2015
NP	Wetlands/Riparian Zones	No wetland/riparian areas are located along the access road or on the well site.	Adam Stephens	7/6/2015
NP	Wild and Scenic Rivers	There are no wild or scenic rivers near the proposed project.	Dave Jacobson	7/6/2015
NP	Wilderness/WSA	There is no wilderness or WSAs within or near the project area.	Dave Jacobson	7/6/2015

Determi-nation	Resource	Rationale for Determination	Signature	Date
NP	Woodland / Forestry	None present from aerial photography review.	E. Ginouves	7/6/2015
PI	Vegetation	Vegetation is expected to be removed with the implementation of the Proposed action.	J. Reese	7/13/2015
NI	Visual Resources	The proposed project is within VRM class IV and will meet the objectives of the VRM class.	Dave Jacobson	7/6/2015
NP	Wild Horses and Burros	Project is not within wild horse Herd Area (HA) or Herd Management Area (HMA).	C. Hunter	7/6/2015
NP	Lands with Wilderness Characteristics	The proposed project is not within an area that was identified as having wilderness characteristics in the 2011 and updated 2014 wilderness characteristics inventory.	Dave Jacobson	7/6/2015

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator	/s/ Gina Ginouves	7/29/15	
Authorized Officer	Elizabeth R Burghard	7/29/15	

Bureau of Land Management
Cedar City Field Office

Technical report for Special Species and Other Wildlife Species

Project Name and Environmental Assessment Number: Vitrus Lone Pine Exploration
Resources Analyzed: Special Status Wildlife, Big Game, and Migratory Birds and Raptors
Wildlife Biologist: Sheri Whitfield
Date: July 29, 2015

Relationship to Planning

- Utah Prairie Dog Revised Recovery Plan 2012
- Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), as amended.
- Fish and Wildlife Conservation Act of 1980
- Sikes Act of 1974
- 1962 Bald and Golden Eagle Protection Act
- Best Management Practices for Raptors and Their Associated Habitats in Utah
- Birds of Conservation Concern 2008
- Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds
- IM 2008-050, Migratory Bird Treaty Act – Interim Management Guidance
- BLM Manual 6840 – Special Status Species Management
- Utah Comprehensive Wildlife Conservation Strategy (CWCS)
- Utah Partners in Flight Avian Conservation Strategy Version 2.0.
- U.S. Fish and Wildlife Service Birds of Conservation Concern 2008

Wildlife (Including Special Status Species, Big Game, and Migratory Raptors and Birds)

FWS List provided by the Information, Planning and Conservation System (IPAC) July 29, 2015

Common Name	Scientific Name	Status	Habitat suitability or know occurrence of the species in or near Project Area.	Determination
California condor	*Gymnogyps californianus*	E	Occurrence would be rare and would be closely associated with feeding on carrion.	No Affect
Greater sage-grouse	*Centrocercus urophasianus*	C	No UDWR mapped habitat in the Project Area.	N/A
Mexican spotted owl	*Strix occidentalis lucida*	T	No suitable habitat is present in the Project Area.	No Affect
Southwestern willow flycatcher	*Empidonax traillii extimus*	E	No suitable habitat is present in the Project Area.	No Affect
Utah prairie dog	*Cynomys parvidens*	T	No mapped habitat occurs in the Project Area.	No Affect
Virgin River chub	*Gila seminude*	E	No suitable habitat is present in the Project Area.	No Affect[1]
Western Yellow-billed cuckoo	*Coccyzus americanus occidentalis*	T	No suitable habitat is present in the Project Area.	No Affect

Common Name	Scientific Name	Status	Habitat suitability or know occurrence of the species in or near Project Area.	Determination
Woundfin	*Plagopterus argentissinum*	E	No suitable habitat is present in the Project Area.	No Affect[1]

[1] The Virgin River chub and Woundfin will not be discussed further. These species are not present in Iron or Beaver Counties. There would be no water depletion from a hydrologic unit (8-digit HUC) in these counties that is occupied by the species in an adjacent county. No further coordination with FWS is required.

Utah Prairie Dog

One occupied prairie dog colony occurs 1 mile southeast of the project area. Colony 0123a is not visual from the project area due to the topography (i.e. rolling hills). Access to the project area avoids the existing colony. Drilling activities are avoiding the prairie dog colony by greater than 0.5 miles. A survey was conducted March 13, 2015 within the project area. No burrows or Utah prairie dogs were identified, therefore; impacts to Utah prairie dogs are not expected.

BLM Sensitive Wildlife

Ferruginous Hawk: Primary breeding habitat is pinyon-juniper and secondary breeding habitat is shrubsteppe. Edges of pinyon-juniper woodlands, utility structures (transmission poles), cliffs, and isolated trees serve to provide nesting as well as perching structures for ferruginous hawk. Ferruginous hawks have been documented approximately 0.18 miles from the Project Area. The contractor has indicated that drilling activities would not occur during the ferruginous nesting period (April 1 – August 31), so impacts are not anticipated. For other sensitive wildlife species, see the table below.

Big Game Species

Pronghorn (*Antilocapra americana*): Pronghorn are primarily found in grassland and sagebrush habitats often consisting of low vegetation structure allowing for long-range visibility. A vegetation height of approximately10-18 inches is often preferred in sagebrush/shrubsteppe communities; however, pronghorn may select fawning sites which exceed the preferred vegetation height in order to provide adequate cover for hiding. Pronghorn fawning usually occurs between May and June. Plant diversity within sagebrush/shrubsteppe habitats should be comprised of approximately 5-10 grass species, 10-70 forbs, and 5-10 species of shrubs.

Pronghorn utilize a variety of vegetation with shrubs typically being highest in composition followed by forbs and grasses. Use of shrubs is typically highest during the fall and winter months. Forage preference for forbs is high but is limited due to seasonal availability.

The area is mapped as UDWR crucial yearlong pronghorn habitat has been identified within the lower elevation ranges associated with the Project Area. The contractor has indicated that drilling activities would not occur during the pronghorn fawning period (April 15 – June 15), so impacts are not anticipated.

Migratory Birds

A variety of migratory birds occurs or is likely to occur within the Project Area during the spring, summer, and fall months. These species would be associated with shrub steppe, and

grassland habitats. The Project Area is within the Great Basin Bird Conservation Area. The contractor has indicated that drilling activities would not occur during the migratory bird nesting period (April 1 – July 30), so impacts to nesting birds are not anticipated.

This list has been prepared pursuant to BLM IM No. IM 2011-037 Sensitive Species List

Common Name	Status	Summary
ALLEN'S BIG-EARED BAT	Sensitive	Rare limited to southern Utah.
AMERICAN WHITE PELICAN	Sensitive	No potential habitat.
ARIZONA TOAD	Sensitive	Typically only found in southern Utah (Washington County). No potential habitat.
BALD EAGLE	Sensitive	Bald eagles are common in the winter in valleys and may be observed foraging within any of the allotments November 1-March 15.
BIG FREE-TAILED BAT	Sensitive	No documented occurrences. Rare in Utah.
BLACK SWIFT	Sensitive	Rare in Utah and no potential habitat
BONNEVILLE CUTTHROAT TROUT	Sensitive, CS	No potential habitat. Occurs only at Birch Creek
BURROWING OWL	Sensitive	Potential suitable habitat. No burrowing owls identified.
DARK KANGAROO MOUSE	Sensitive	No suitable habitat. Occurs typically in sand dunes.
FERRUGINOUS HAWK	Sensitive	Documented nest 1.5 miles from project area. Activities are expected to occur outside the nesting season.
FRINGED MYOTIS	Sensitive	No documented occurrences.
GOLDEN EAGLE	Eagle Protection Act	No nest sites in the area.
GREATER SAGE-GROUSE	Candidate	No UDWR mapped habitat occurs within project area.
KIT FOX	Sensitive	No suitable habitat.
LEAST CHUB	Candidate	The species is not present in the Cedar City Field Office
LEWIS'S WOODPECKER	Sensitive	No potential habitat.
LONG-BILLED CURLEW	Sensitive	No suitable habitat.
NORTHERN GOSHAWK	Sensitive	No potential habitat.
PYGMY RABBIT	Sensitive	No documented within the project area.
SHORT-EARED OWL	Sensitive	Potential suitable habitat.
SOUTHERN LEATHERSIDE CHUB	Sensitive	No potential habitat.
SPOTTED BAT	Sensitive	No documented occurrences.
THREE-TOED WOODPECKER	Sensitive	No potential habitat
TOWNSEND'S BIG-EARED BAT	Sensitive	No potential habitat in the project area.
WESTERN TOAD	Sensitive	No potential habitat. No riparian in the project area.
WESTERN RED BAT	Sensitive	No documented occurrences.

CS = Species receiving special management under a Conservation Agreement in order to preclude the need for Federal listing.

Wildlife Management Unit	Allotment/Pasture
Southwest Desert Management Unit	Upper Horse Hollow / 03

UDWR Bird Habitat	Value	Season	Allotment

Coverages			Upper Horse Hollow
Band-tailed pigeon	Crucial	Spring-early fall	---
	Substantial	Spring-early fall	---
Chukar	Substantial	Yearlong	---
Ring-necked Pheasant	Substantial	Yearlong	---
Wild Turkey	Crucial	Summer	---

UDWR Mammal Habitat Coverage	Value	Season	Allotment
Pronghorn	Crucial	Year-Long	Upper Horse Hollow

Utah Bird Conservation Habitat Area - None identified
North American Bird Conservation Areas – Horse Hollow Allotment

APPENDIX C

Lease Notices

UT1105-034 (pre-lease parcel number for what became Federal lease UTU-84126)
T. 34 S., R. 11 W., Salt Lake
Sec. 3, lots 1-4, S2NE;
Sec. 4, lot 1;
Sec. 5, lot 4, SWNW, SW, NWSE;
Secs. 6, and 7, all;
Sec. 8, NWNE, N2NW, SWNW.
1,991.73 Acres

Iron County, Utah
Cedar City Field Office

UT-LN-07
LEASE NOTICE - RAPTOR HABITAT

The lessee/operator is given notice that lands in this lease have been identified as containing Raptor Species and Habitat. Seasonal restrictions to the Surface Use Plan of Operations may be required in order to protect the Raptors and/or habitat in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.

UT-LN-52
LEASE NOTICE-UTAH SENSITIVE SPECIES

The lessee/operator is given notice that lands in this parcel have been identified as containing habitat for named species on the Utah Sensitive Species List. Modifications to the Surface Use Plan of Operations may be required in order to protect these resources from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, Migratory Bird Treaty Act and 43 CFR 3101.1-2.

UT-LN-58
UTAH SENSITIVE SPECIES (PYGMY RABBIT)

The lessee/operator is given notice that lands in this parcel have been identified as containing habitat for named species on the Utah Sensitive Species List. Modifications to the Surface Use Plan of Operations may be required in order to protect these resources from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2. This notice may be waived, accepted, or modified by the authorized officer if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated.

UTAH PRAIRIE DOG LEASE NOTICE

Utah prairie dog lease notice as identified in BLM's 13 December 2004 memo to the USFWS (attached).